

## CLAIMS

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1. A method of improving the recognition accuracy of a speech recognizer, comprising the steps of:

5 receiving live input data;

collecting live input data and associated recognition responses;

10 without supervision, applying a given adaptation algorithm to the collected information to improve the recognition accuracy of the speech recognizer; and

15 redeploying the adapted speech recognizer in the target environment

*D4*

2. The method as described in Claim 1 wherein the

15 live input data includes digitally-encoded speech waveform samples.

3. The method as described in Claim 1 wherein the

live input data includes a processed version of given

20 speech waveform samples, wherein the processed version is not capable of being recognized by a human listener yet is sufficient for use as input to the given adaptation algorithm.

4. The method as described in Claim 1 wherein the live input data and associated recognition responses are collected over a given time period.

5 5. The method as described in Claim 1 wherein the adaptation algorithm is based on an acoustic model.

6. The method as described in Claim 5 wherein the acoustic model is a Hidden Markov Model.

10 7. The method as described in Claim 1 wherein the adaptation algorithm is based on a language model.

15 8. The method as described in Claim 7 wherein the language model is Word Bigram Statistics.

9. The method as described in Claim 1 wherein the adaptation algorithm is based on a pronunciation model.

20 10. The method as described in Claim 9 wherein the pronunciation model is encoded in a phonetic transcription lexicon.

11. The method as described in Claim 1 wherein the adaptation algorithm is based on search parameters of a recognition algorithm of the speech recognizer.

5       12. The method as described in Claim 1 wherein the adaptation algorithm is based on a combination of models selected from the group consisting essentially of acoustic models, language models, pronunciation models, and search parameters of a recognition algorithm of the speech  
10      recognizer.

15      13. The method as described in Claim 1 wherein the adaptation is applied as live input data is collected and recognition responses to that live input data are generated.

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**14.** A method of improving the recognition accuracy of a speech recognizer deployed in an environment to receive live input data, comprising the steps of;

5 collecting live input data and associated recognition responses; and

without supervision, applying a given speaker-independent adaptation algorithm to the collected information to improve the recognition accuracy of the speech recognizer.

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**15.** The method as described in Claim **11** wherein the speaker-independent adaptation algorithm is selected from the group of models consisting essentially of acoustic models, language models, pronunciation models, search 15 parameters, and combinations thereof.

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